

# The Recovery Through Retrofit Initiative: Creating Jobs and Saving Homeowners Money

Presented by U.S. Small Business Administration  
& White House Council on Environmental Quality



## RECOVERY THROUGH RETROFIT COURSE GUIDE

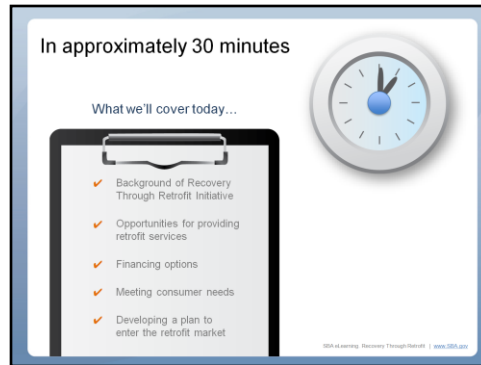
Welcome to the U.S. Small Business Administration's training course about the Recovery Through Retrofit initiative!

Please use this course guide to capture notes and action-items to assist in your learning.

This course was created by the SBA's Office of Entrepreneurship Education in partnership with the White House Council on Environmental Quality and the other Federal agencies participating in the Recovery Through Retrofit initiative.

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This course will provide an overview on the progress of the Recovery Through Retrofit initiative, the skills needed to make American homes more energy efficient, and the variety of resources available to support small businesses interested in participating in this industry. The training course has been designed to increase accessibility through transcripts, image tags, keyboard shortcuts and alternate versions available upon request. Users can also avail themselves of course player options to navigate slides, pause the presentation or access supporting documents.

This initiative presents an opportunity for your business and the purpose of this course is to help you learn how you can take full advantage of it.

Here's what we'll cover today:

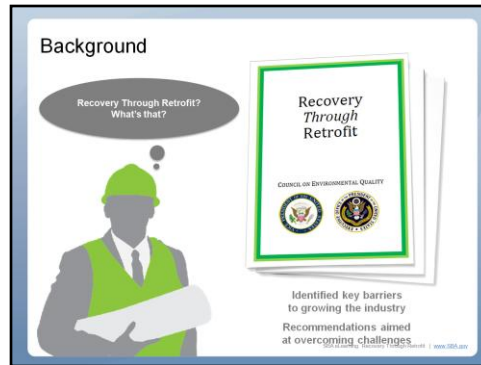
- Background on the home energy efficiency industry and the Recovery Through Retrofit initiative
- Opportunities for providing retrofit services
- Helping homeowners finance retrofits
- Building your business by meeting consumer needs
- And developing your plan to enter into the retrofit market



Let's start with a little background.

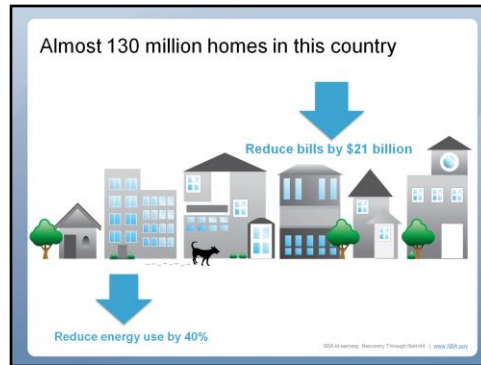
Recovery Through Retrofit...“What’s that?” you’re probably asking?

In 2009, the White House Council on Environmental Quality (*called **CEQ** for short hereafter*) announced a plan for creating jobs and boosting energy savings, through home energy efficiency improvements.

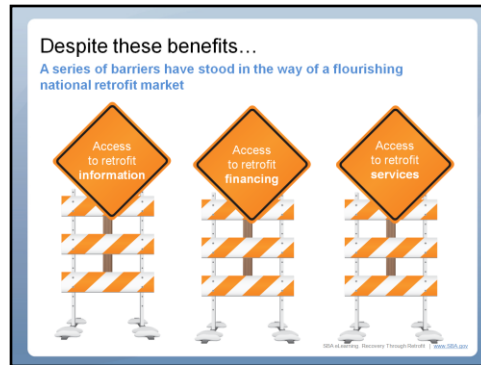


CEQ teamed up with 11 other agencies to find ways that the Federal government could help foster growth in the home energy improvement industry, and produced the *Recovery Through Retrofit Report*, which identified key barriers to growing the industry and laid out several recommendations aimed at overcoming those challenges.

Over the last two years, agencies have put the Recovery Through Retrofit plan in action by launching several new efforts that we're pleased to update you on today.



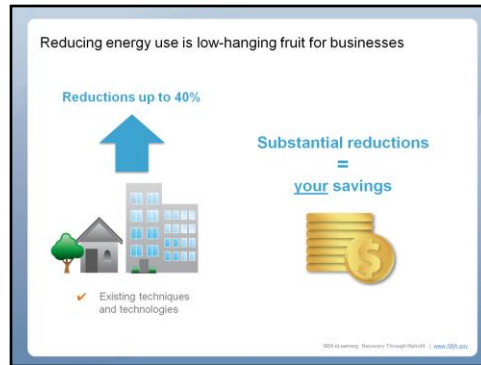
There are almost 130 million homes in this country. Existing techniques and technologies can reduce home energy use by up to 40 percent, lowering associated greenhouse gas emissions and potentially reducing home energy bills by as much as \$21 billion annually, paying for themselves over time.



And yet, despite these economic and environmental benefits, a series of barriers for homeowners have stood in the way of a flourishing national retrofit market.

These barriers include...

1. Access to retrofit information: [Consumers don't have access to straightforward and reliable information on home energy retrofits, so they aren't equipped to make informed decisions and take action.]
2. Access to retrofit financing: [The upfront costs of a retrofit often exceed the average homeowner's budget. Homeowners also worry about recouping their investment should they sell their homes.]
3. Access to retrofit services: [There aren't enough businesses and workers who are skilled in weatherization and efficiency retrofits.]



Reducing energy use in American homes really is low-hanging fruit for businesses.

Reductions of up to 40% per home can be achieved with existing retrofit techniques and technologies. Such substantial reductions translate directly into savings that more than offset the cost of a retrofit.



So retrofits make good economic sense, more than paying for themselves over time.

How can you open the doors to retrofit opportunities?

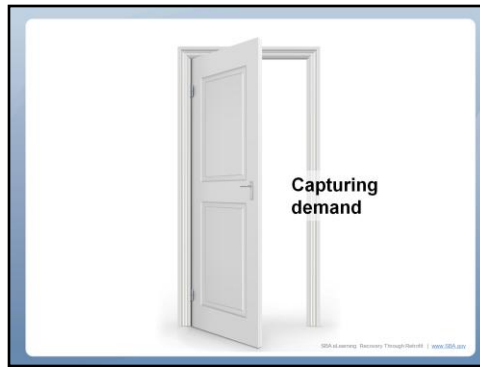
Here are three things you'll need to do...

Capture consumer demand.

Stay informed on ways the Government is making it affordable.

Deliver quality retrofit services.



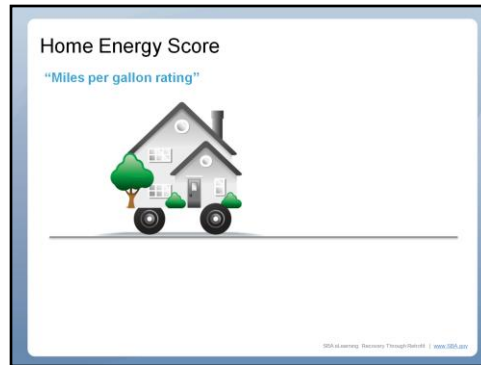


First, let's talk about capturing demand. You're probably thinking, "So what does *capturing demand* actually involve?"

It really boils down to educating your potential customers - showing consumers how much they can save by reducing their energy consumption.

Once they understand how big the savings can be, they'll begin to see the compelling reasons for investing in retrofits – which means they'll be more willing to hire someone to perform a retrofit on their homes.

Fortunately, there's a very quick, eye-opening way to educate consumers and help make sure that "someone" is you!

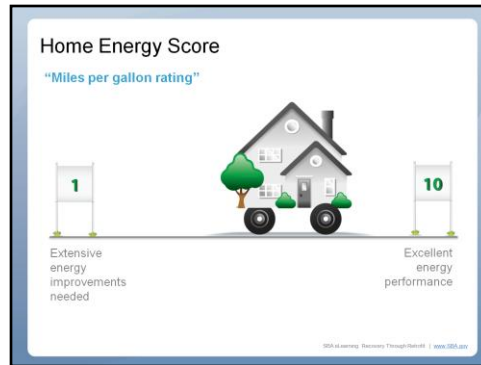


It's called a Home Energy Score.

The Home Energy Score is being developed by the U.S. Department of Energy as a way to assess residential energy performance.

Essentially, the Home Energy Score is like a miles-per-gallon rating—but for a home.

And just like miles-per-gallon, a higher score is better.

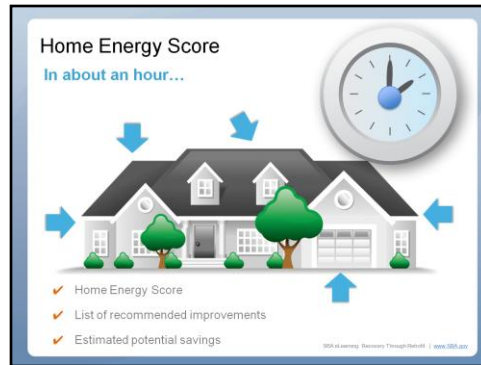


A home scoring a 10 probably wouldn't need much improvement and a home scoring only a 1 is a candidate for an extensive retrofit.

In addition to the numerical score, it also comes with a report that pinpoints different energy inefficiencies and recommends corresponding upgrades.

It also includes estimates for potential savings a retrofit might generate.

A pilot for the Home Energy Score was completed in 2011. The Score is now in its first Implementation phase, and is being offered by at least 17 partners across the nation.



So how does a Home Energy Score Work?

Pretty quickly actually - it only takes about an hour.

A qualified home energy assessor collects about 40 pieces of data during that time.

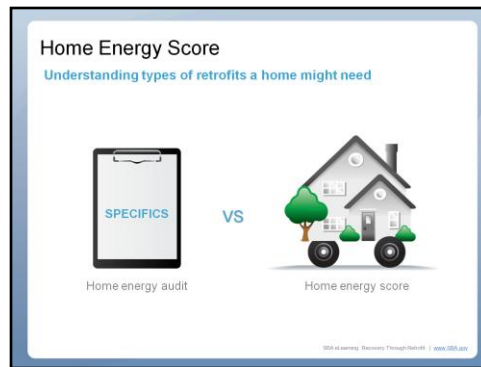
As they perform the walkthrough, they'll enter the data into a Home Energy Scoring Tool, via a laptop or PDA.

Or they may capture the data on a paper collection sheet and enter it when they get back to the office.

The Scoring Tool will generate the Home Energy Score, a list of recommended improvements, and estimated potential savings.

The Score and Report is provided to the homeowner, and the assessor answers any questions and discusses with the homeowner how to proceed.

The Home Energy Scoring Tool will be provided only to qualified assessors. We'll talk a little later about how you can qualify as or find an assessor.



As we noted earlier, a Home Energy Score is a great starting place for generally understanding what type of retrofits a home might need.

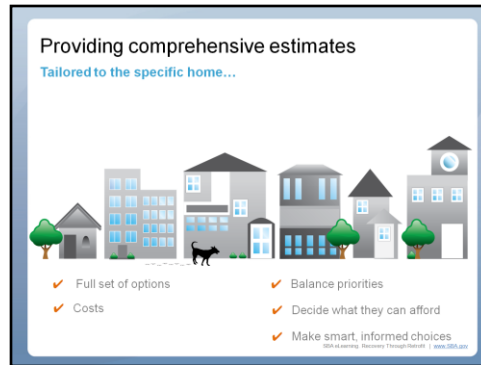
But before a homeowner proceeds with a retrofit, homeowners are encouraged to get a comprehensive home audit to better understand the specifics of what's involved.

They have similar names so what's the difference between a "home energy audit" and the "Home Energy Score?"



Basically, it's this - where the Home Energy Score is based on national installation costs and average state utility costs, a full Home Energy Audit will:

- Generate a more detailed and prioritized list of improvements
- Include a very detailed scope of work
- Test the home's health, safety and durability
- Factor in the homeowner's behavior, preferences, and circumstances



Based on those considerations, the Home Energy Audit will provide far more comprehensive and precise estimates for both costs and savings.

It maps out a specific program of improvements that's closely tailored to the specific home - including a full set of options and how much those things will cost.

It's likely that homeowners will not be able to address every single consideration – but the level of detail an audit provides will enable them to evaluate their choices - and clearly determine which improvements will yield the biggest benefits.

So they can balance their priorities, decide what they can afford, and make smart, informed choices.



Of course, as any good businessperson knows, while providing straightforward information is important, in order to really drive consumer demand for a product or service, you need to do more. Here are tips to help encourage homeowners in your area to start asking for retrofit services.

It is not enough to provide information, programs must sell something people want

- High home energy use is not always a pressing issue for people; find other appealing draws such as health, comfort, energy security, and competition or community engagement to attract interest.

Time spent studying the target population is important

- A blanket marketing campaign to reach everyone will likely be ineffective and expensive, especially at the start of a program. Know your audience - a marketing strategy that works in one area won't necessarily work in another. Find and target early adopters and tailor your message to this audience.

Partner with trusted messengers

- Larger subsidies and more voluminous mailings don't necessarily win over more customers. Programs can and should have a local face, with buy-in from community leaders. Tapping trusted parties, such as local leaders and local organizations, builds upon existing relationships and networks.

One touch is not enough

- The advertising industry's "three-times convincer" concept means that the majority of people need to be exposed to a product message at least three times before they buy into it. Energy efficiency is an especially tough product – it can be expensive and can't be readily touched, tasted or seen – and that calls for a layered marketing and outreach approach that achieves multiple touches on potential participants.

Make it easy, make it fast

- Offer seamless, streamlined services – package incentives, minimize paperwork and pre-approve contractors – give people fewer reasons to decide against home improvements by making it simple.

A well-qualified workforce and trustworthy work are vital

- Solid performance builds trust with customers by reliably producing energy savings, as well as the health, safety, and comfort benefits of home energy improvements. We'll talk more about workforce guidelines that the Department of Energy is developing a little later on.

Know success and failure by measuring it, and experiment to figure out what works

- Designing your business for data collection and evaluation at the start allows mid-stream adjustments, better selection among strategies, and knowing success when it arrives.

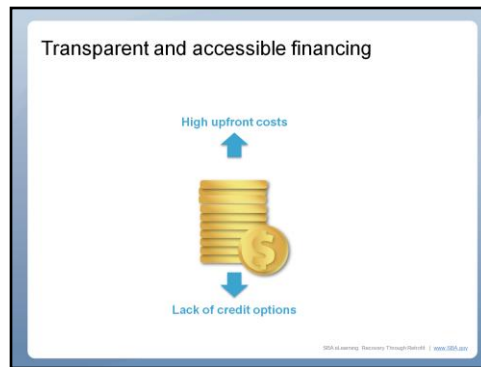
Rebates, financing and other incentives do matter

- Finally, experience shows that incentives do motivate the choice to do home upgrades and can be extremely important to get a program off the ground. Rebates, financing and other incentives do matter, so with that, let's move on to. . .



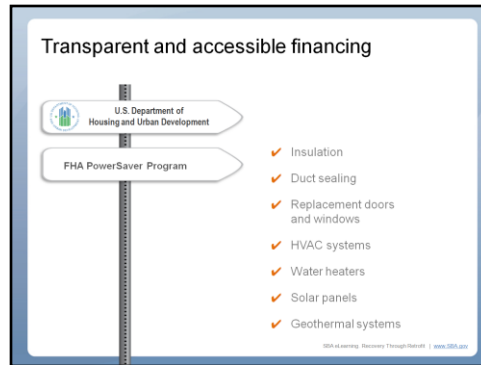


Making home energy upgrades more affordable for consumers.



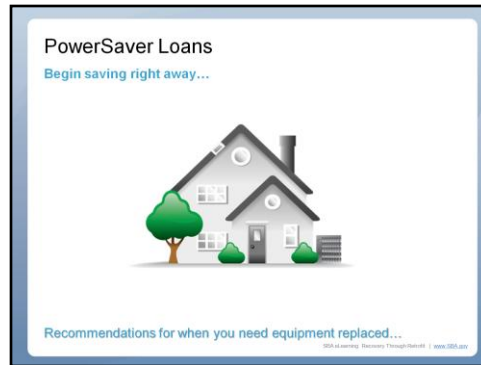
High upfront costs and a lack of credit and financing options dissuade many homeowners from completing or even considering energy efficiency home retrofits, so under Recovery Through Retrofit, the Federal government is working to make financing more transparent and accessible, repayable over a longer period of time, and overall more consumer-friendly.



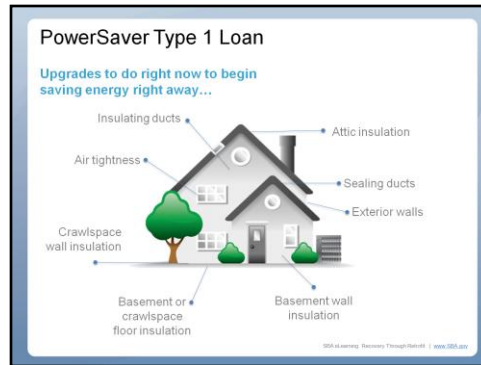


...to make energy-efficient improvements of their choice, including the installation of insulation, duct sealing, replacement doors and windows, HVAC systems, water heaters, solar panels, and geothermal systems.

With 17 national, regional, and local lenders participating across the country, the PowerSaver pilot program is poised to assist thousands of homeowners in its first two years. More information on participating lenders will be provided later on.

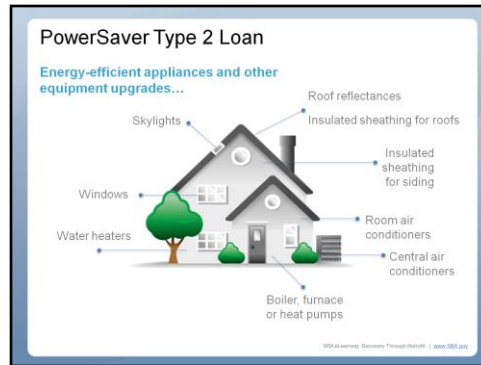


PowerSaver loans must be used to make cost-effective, energy-saving improvements, based on a list published by the FHA and the DOE. And improvements are organized into two types – ones you can do to begin saving energy right away and recommendations for when you need to replace equipment in your home.



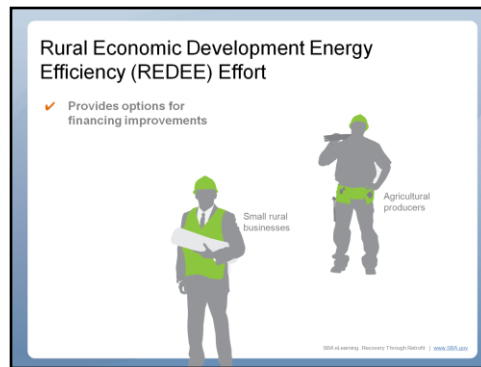
Type 1 improvements are recommended as upgrades homeowners can do right now to begin saving energy right away:

- Attic insulation
- Basement wall insulation
- Basement or crawlspace floor insulation
- Crawlspace wall insulation
- Air tightness
- Exterior walls
- Sealing ducts
- Insulating ducts



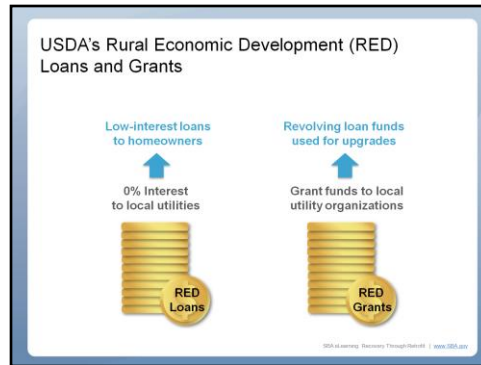
And PowerSaver Type 2 loans cover energy-efficient appliances and equipment upgrades such as:

- Central air conditioners
- Boiler, furnace or heat pumps
- Room air conditioners
- Roof reflectances
- Insulated sheathing for roofs
- Skylights
- Insulated sheathing for siding
- Water heaters
- and windows



PowerSaver Loans for homeowners are just one financing option for energy improvements. The Rural Economic Development Energy Efficiency Effort, also offers several options for financing improvements by small rural businesses and agriculture producers.





First, through the USDA's Rural Economic Development Program, both loans and grants are available to support home retrofits, while creating and retaining rural jobs.

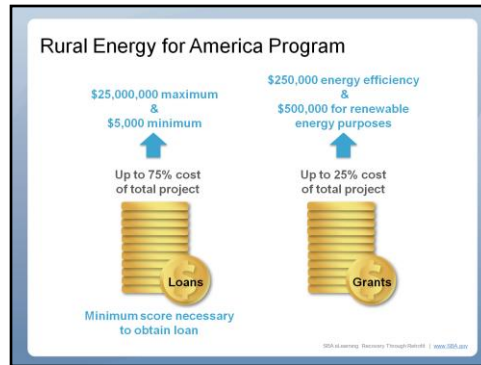
USDA provides zero interest loans to local utilities, which can in turn provide low-interest loans to homeowners in their service territories.

Grants are also provided to local utility organizations, to fund the establishment of revolving loan funds, which can also be used for energy efficiency upgrades.

More information on how to tap into the REDEEE efforts will be provided later in the presentation.



There are also a whole host of other types of financial incentives available to homeowners for retrofits. They include state- or local-run revolving loan funds to utility rebates or on-bill financing programs to federal and state tax credits. To find out what types of incentives are available for homeowners in your area, visit the [Database of State Incentives for Renewables & Efficiency](#). You will find a link to this site at the end of the presentation.



Rural Energy for America Program loans cover...

- Up to 75% of the project's cost, with a maximum of \$25 million and minimum of \$5,000.
- These loans are scored and there is a minimum score necessary to obtain a loan.
- These loans are awarded on a competitive basis.

Rural Energy for America Program grants cover...

- Up to 25% of the total eligible project costs.
- Energy efficiency grants have a minimum of \$1,500 and maximum of \$250,000 while renewable energy grants have a minimum of \$2,500 and maximum of \$500,000.
- These grants are awarded on a competitive basis also.

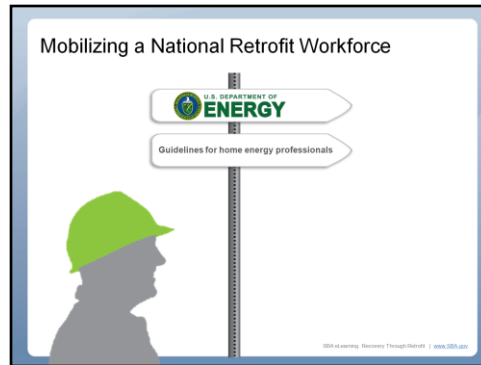


Finally, let's talk about how you can ensure that your business is delivering high-quality retrofits to homeowners.

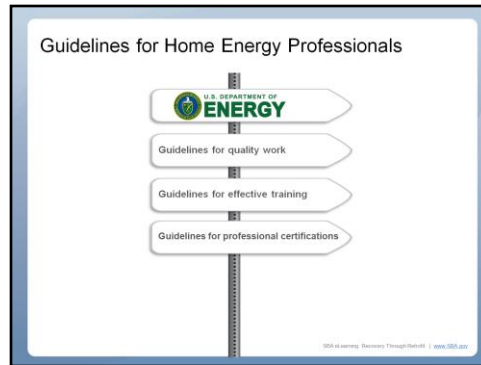


Despite the presence of a number of different existing standards, trainings, and certification programs for the home energy upgrade sector, to date, there have not been enough well-trained residential energy retrofit workers to expand the industry.

Furthermore, there has been no clear guideline or standard to assure consumers of the quality of the work being done on their home.



To help establish the foundation of consumer confidence that work will be completed correctly and produce the expected energy savings and benefits, the Department of Energy (DOE), in collaboration with other agencies, has set out to develop a series of Guidelines for Home Energy Professionals.

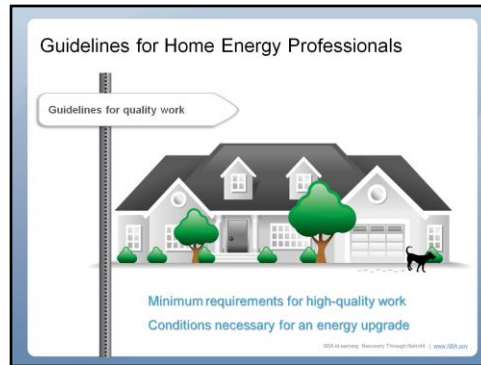


These Guidelines will help foster the growth of a skilled and credentialed workforce, which can support your small business. They include three components:

Guidelines for quality work:

Guidelines for effective training:

Guidelines for professional certifications:



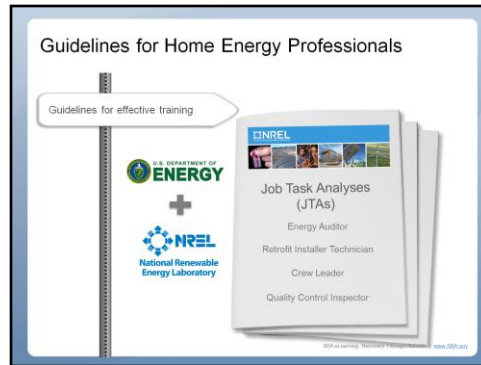
The Guidelines for quality work, or “standard work specifications,” are being created to define minimum requirements for high-quality work and the conditions necessary to achieve the desired outcomes of an energy upgrade.

The project's initial focus is on single-family homes, with specifications for multifamily and mobile homes to follow.

The Guidelines for quality work received public comment earlier this year, and the final versions will be released later in 2012.

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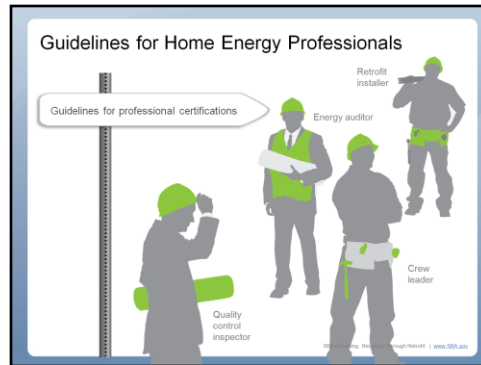




Next we will discuss the Guidelines for effective training:

The Department of Energy and the National Renewable Energy Laboratory (NREL) worked with leaders in home-energy improvement industry to perform Job Task Analyses for four common job classifications:

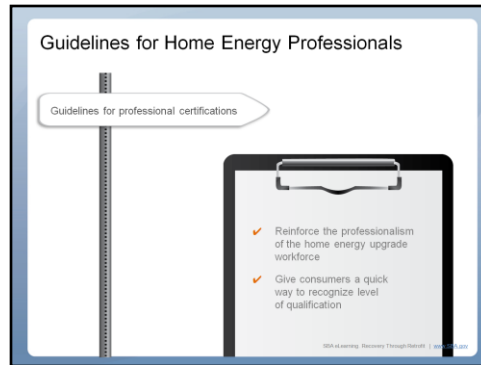
- Energy Auditor
- Retrofit Installer Technician
- Crew Leader
- Quality Control Inspector



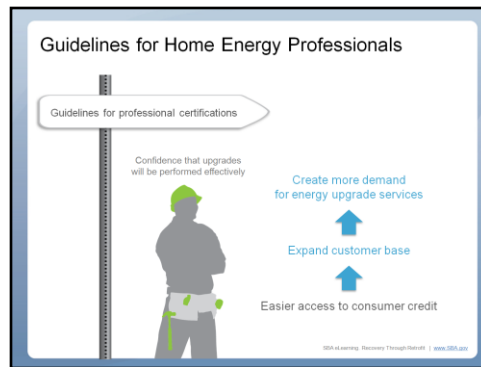
Finally DOE has also enlisted technicians and trainers from across the home performance industry to support high-quality, nationally-recognized professional certifications.

These new voluntary certifications will cover the job classifications mentioned earlier: energy auditor, retrofit installer, crew leader and quality control inspector.

DOE is currently piloting certifications for home energy professionals.



Once completed, these certifications will reinforce the professionalism of the home energy upgrade workforce and give consumers a quick way to recognize an individual's level of qualification. Consumers are more likely to engage the services of certified professionals, because they see certification as an assurance of quality.



They will also give the financial industry greater confidence that energy upgrades will be performed effectively, resulting in easier access to consumer credit to invest in these upgrades. Easier access to credit can expand the customer base and create more demand for energy upgrade services.



[VO]

The EPA created the Healthy Indoor Environment Protocols for home energy upgrades as guidance for conducting home assessments and to provide the specific responses necessary to maintain or improve indoor air quality in conjunction with energy efficiency retrofits or other remodeling activities.

You can access the Healthy Indoor Environmental Protocols step by step at the end of this course or by visiting <http://www.epa.gov/iaq/homes/retrofits.html>



If you're interested in designing a program that offers home energy efficiency improvement to consumers, you should begin by characterizing the market in your area.

### **Demographics:**

Understand how many households there are in your area. Do you know the average income and whether the majority of people are renters or owners?

### **Consider the climate:**

Is it a heating climate, cooling climate, or a little of both? Some home energy efficiency improvements will be more popular depending on the weather in a given area.

### **Housing stock:**

How many different building types are there in your area? Single family vs. small multi-family vs. large multi-family? How old are the houses and are there any common characteristics?

### **Consumption by fuel type:**

What is the average consumption by fuel type, housing type? For heating or cooling (or both)?

### **The major types of equipment:**

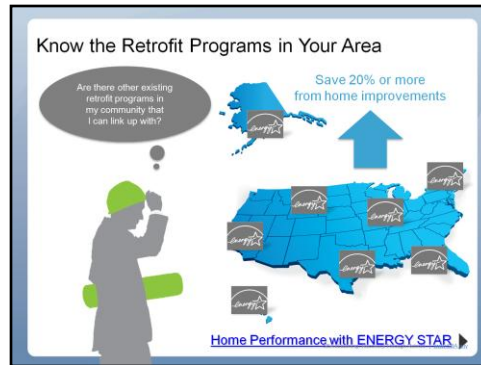
What type of heating equipment is used (furnaces, boilers, heat pumps, electric resistance)? Central air conditioners vs. room air conditioners? Gas or electric water heaters?

### **Utilities and Rates:**

Are there different utilities? Gas and electric? What are their rates and rate structures?

### **Workforce:**

You may also want to consider the existing workforce in your area. Are there a lot of contractors in your area? What kinds of work do they perform? Are they certified? What about home energy auditors or assessors, or quality control inspectors?



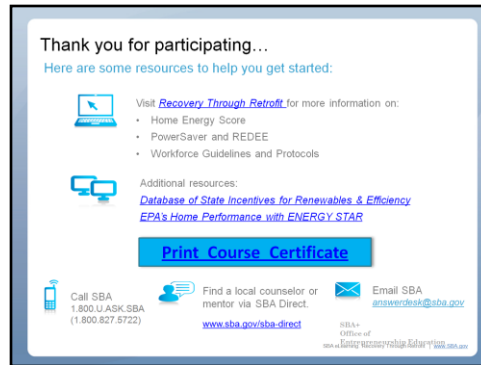
And finally, are there other existing retrofit programs in your community that your business could link up with?

There are a number of different types of home energy upgrade programs that a small business may want to partner with. At the Federal level, EPA and DOE's Home Performance with ENERGY STAR is a comprehensive home energy improvement program that has been implemented in more than 30 states.

The program has established a network of qualified contractors who perform energy audits and retrofits, and homeowners typically save 20 percent or more on energy bills from common home improvements.

You can find out if there's a Home Performance with ENERGY STAR program in your area and learn about successes that contractors have had by participating on the web site for the program.

You may also want to familiarize yourself with other Federal efforts, like DOE's Better Buildings Neighborhood Program and Weatherization Assistance Program, as well as state, local, and utility retrofit programs that may be offered in your area.



Thank you for participating in this training.

The Recovery Through Retrofit initiative was designed to help pave the way for a self-sustaining home energy upgrade industry.

We hope that the information provided here will help you capitalize on the small business opportunities this industry presents.

For more information on all of the efforts discussed here and to stay up-to-date on our progress, please visit the Recovery Through Retrofit website <http://www.whitehouse.gov/administration/eop/ceq/initiatives/retrofit>, as well as the other sites we've mentioned today. Also visit the Database of State Incentives for Renewables and Efficiency at <http://www.dsireusa.org> and EPA's Home Performance with ENERGY STAR at [www.energystar.gov/index.cfm?fuseaction=hpwes\\_profiles.showSplash](http://www.energystar.gov/index.cfm?fuseaction=hpwes_profiles.showSplash)

And now that you've completed this course, we hope that you will take the next step and put what you've learned into action. If you have completed this course and wish to receive a certificate, please click the hyperlink labeled 'Print Course Certificate'.

If you have any questions about starting or expanding a business, please contact SBA or one of our resource partners for help (call 1 – 800 – 827 – 5722 , email AnswerDesk at [sba\\_dot\\_gov](mailto:sba_dot_gov) or visit [www.sba.gov/sba-direct](http://www.sba.gov/sba-direct)).